Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1 - 94.(Cancelled)

95. (New) A method for controlling microbial or biofilm growth in a medium, the method comprising mixing

a nitrogen-containing compound or mixture of such compounds selected from the group consisting of:

(i) salts of the formula $Y^{x-}Z^{n+}_{x/n}$, wherein x is 1 to 3, Y^{x-} is a basic form of an acid Y that contains at least one moiety selected from the group consisting of a primary amine moiety, a secondary amine moiety, a tertiary amine moiety, an amide moiety, an imide moiety, a sulfamide moiety, a sulfimide moiety, and an amineimine moiety, and Z^{+} is a cation other than a cation of the form $[NH_2R^3R^4]^+$ wherein $[NH_2R^3R^4]^+$ is an acidic form of a base NHR^3R^4 wherein R^3 and R^4 are each independently selected from the group consisting of H and C_{1-8} alkyl, or R^3 and R^4, together with the nitrogen atom to which they are attached, form a 5- to 10-member heterocyclic ring optionally substituted by one or more groups selected from C_{1-6} alkyl, C_{3-8} cycloalkyl, halogen, hydroxy, $-OC_{1-6}$ alkyl or $-OC_{3-8}$ cycloalkyl, and n is a whole number greater than zero; and

(ii) amphoteric molecules Q containing at least one moiety selected from the group consisting of COOH and SO_3H and at least one moiety selected from the group consisting of a primary amine moiety, a secondary amine moiety, and a tertiary amine moiety;

and an aqueous solution of a hypochlorite oxidant to form a biocide,

wherein the molar ratio of nitrogen atoms in said nitrogen-containing compound to said hypochlorite is at least 1:1,

and applying said biocide to said medium.

96. (New) A method according to claim 95, wherein Y is selected from the group consisting of:

(a) straight, branched and cyclic molecules containing at least one moiety selected from the group consisting of an amide moiety, an imide moiety, a sulfamide moiety, a sulfimide moiety, and an amineimine moiety, and Y^{x-} is a basic form of said molecule; and

(b) amphoteric molecules containing at least one moiety selected from the group consisting of COOH and SO_3H and at least one moiety selected from the group consisting of a primary amine moiety, a secondary amine moiety, and a tertiary amine moiety, and Y^{x-} is an anionic form of the amphoteric molecule.

97. (New) A method according to claim 96, wherein Y^{x-} is of the formula $[R^1R^2N-A-COO]^{x-}$ or $[R^1R^2N-A-SO_3]^{x-}$, wherein:

A is a bond, straight-chain or branched C_{1-20} alkyl, straight-chain or branched C_{2-20} alkenyl, straight-chain or branched C_{2-20} alkynyl, C_{3-10} cycloalkyl, straight-chain or branched C_4-C_{20} alkylcycloalkyl, C_{4-10} cycloalkenyl, C_{4-10} cycloalkynyl, or C_6-C_{10} aryl, wherein each C_{1-20} alkyl, C_{2-20} alkenyl, C_{2-20} alkynyl, C_{3-10} cycloalkyl, C_4-C_{20} alkylcycloalkyl, C_{4-10} cycloalkenyl, C_{4-10} cycloalkynyl or C_6-C_{10} aryl is optionally substituted with one or more groups selected from -COOH, -COH, $-SCH_3$, $-NH_2$, =NH, -NHC(=NH)NH_2, $-C(=O)NH_2$, -OH, 4-hydroxyphenyl, 5-imidazolyl, 3-indolyl, halogen, $-SO_3H$, =O, C_{1-8} alkyl, C_{3-8} cycloalkyl, C_{4-9} cycloalkylalkyl, phenyl, 4-methylphenyl, benzyl, -O-C_{3-8} cyclalkyl, -O-C_{3-8} cycloalkyl, -O-C_{4-9} cycloalkylalkyl, -O-phenyl, -O-4-methylphenyl, -O-benzyl, $-SO_2R^7$ or $-NHR^7$ wherein R^7 is H, C_{1-8} alkyl, phenyl, 4-methylphenyl, benzyl or $-NH_2$, and wherein each C_{1-20} alkyl, C_{2-20} alkenyl, C_{2-20} alkynyl, C_{3-10} cycloalkyl, C_4-C_{20} alkylcycloalkyl, C_{4-10} cycloalkenyl, C_{4-10} cycloalkynyl or C_6-C_{10} aryl optionally contains one to three heteroatoms selected from N, O and S;

R^1 and R^2 are each independently selected from the group consisting of H, straight-chain or branched C_{1-20} alkyl, straight-chain or branched C_{2-20} alkenyl, straight-chain or branched C_{2-20} alkynyl, C_{3-10} cycloalkyl, straight-chain or branched C_4-C_{20} alkylcycloalkyl, C_{4-10} cycloalkenyl, C_{4-10} cycloalkynyl, or C_6-C_{10} aryl, wherein each C_{1-20} alkyl, C_{2-20} alkenyl, C_{2-20} alkynyl, C_{3-10} cycloalkyl, C_4-C_{20} alkylcycloalkyl, C_{4-10} cycloalkenyl, C_{4-10} cycloalkynyl or C_6-C_{10} aryl is optionally substituted with one or more groups selected from -COOH, -COH, -

SCH_3, $-NH_2$, =NH, $-NHC(=NH)NH_2$, $-C(=O)NH_2$, -OH, 4-hydroxyphenyl, 5-imidazolyl, 3-indolyl, halogen, $-SO_3H$, =O, C_{1-8} alkyl, C_{3-8} cycloalkyl, C_{4-9} cycloalkylalkyl, phenyl, 4-methylphenyl, benzyl, $-O-C_{3-8}$ cyclalkyl, $-O-C_{3-8}$ cycloalkyl, $-O-C_{4-9}$ cycloalkylalkyl, -O-phenyl, -O-4-methylphenyl, -O-benzyl, $-SO_2R^7$ or $-NHR^7$ wherein R^7 is H, C_{1-8} alkyl, phenyl, 4-methylphenyl, benzyl or $-NH_2$, and wherein each C_{1-20} alkyl, C_{2-20} alkenyl, C_{2-20} alkynyl, C_{3-10} cycloalkyl, C_4-C_{20} alkylcycloalkyl, C_{4-10} cycloalkenyl, C_{4-10} cycloalkynyl or C_6-C_{10} aryl optionally contains one to three heteroatoms selected from N, O and S;

or R^1 and A, together with the nitrogen atom to which they are attached, form a 5- to 10-member heterocyclic ring or a 5- to 10-member heteroaromatic ring in which the free electron pair of the nitrogen atom to which R^1 and A is attached is not part of the aromatic pi-electron system, the 5- to 10-member heterocyclic or heteroaromatic ring being optionally substituted by one or more groups selected from C_{1-6} alkyl, C_{3-8} cycloalkyl, halogen, hydroxy, $-OC_{1-6}$ alkyl or $-OC_{3-8}$ cycloalkyl;

or R^1 and R^2, together with the nitrogen atom to which they are attached, form a 5- to 10-member heterocyclic ring or a 5- to 10-member heteroaromatic ring in which the free electron pair of the nitrogen atom to which R^1 and A is attached is not part of the aromatic pi-electron system, the 5- to 10-member heterocyclic or heteroaromatic ring being optionally substituted by one or more groups selected from C_{1-6} alkyl, C_{3-8} cycloalkyl, halogen, hydroxy, $-OC_{1-6}$ alkyl or $-OC_{3-8}$ cycloalkyl.

98. (New) A method according to claim 95, wherein Q is of the formula R^1R^2N-A-COOH or R^1R^2N-A-SO_3H, wherein:

A is a bond, straight-chain or branched C_{1-20} alkyl, straight-chain or branched C_{2-20} alkenyl, straight-chain or branched C_{2-20} alkynyl, C_{3-10} cycloalkyl, straight-chain or branched C_4-C_{20} alkylcycloalkyl, C_{4-10} cycloalkenyl, C_{4-10} cycloalkynyl, or C_6-C_{10} aryl, wherein each C_{1-20} alkyl, C_{2-20} alkenyl, C_{2-20} alkynyl, C_{3-10} cycloalkyl, C_4-C_{20} alkylcycloalkyl, C_{4-10} cycloalkenyl, C_{4-10} cycloalkynyl or C_6-C_{10} aryl is optionally substituted with one or more groups selected from -COOH, -COH, -SCH_3, -NH_2, =NH, -NHC(=NH)NH_2, -C(=O)NH_2, -OH, 4-hydroxyphenyl, 5-imidazolyl, 3-indolyl, halogen, -SO_3H, =O, C_{1-8} alkyl, C_{3-8} cycloalkyl, C_{4-9} cycloalkylalkyl, phenyl, 4-methylphenyl, benzyl, -O-C_{3-8} cyclalkyl, -O-C_{3-8} cycloalkyl, -O-C_{4-9} cycloalkylalkyl, -O-phenyl, -O-4-methylphenyl, -O-benzyl, -SO_2R^7 or -NHR^7 wherein R^7 is H, C_{1-8} alkyl, phenyl, 4-methylphenyl, benzyl or -NH_2, and wherein each C_{1-20} alkyl, C_{2-20} alkenyl, C_{2-20} alkynyl, C_{3-10} cycloalkyl, C_4-C_{20} alkylcycloalkyl, C_{4-10} cycloalkenyl, C_{4-10} cycloalkynyl or C_6-C_{10} aryl optionally contains one to three heteroatoms selected from N, O and S;

R^1 and R^2 are each independently selected from the group consisting of H, straight-chain or branched C_{1-20} alkyl, straight-chain or branched C_{2-20} alkenyl, straight-chain or branched C_{2-20} alkynyl, C_{3-10} cycloalkyl, straight-chain or branched C_4-C_{20} alkylcycloalkyl, C_{4-10} cycloalkenyl, C_{4-10} cycloalkynyl, or C_6-C_{10} aryl, wherein each C_{1-20} alkyl, C_{2-20} alkenyl, C_{2-20} alkynyl, C_{3-10} cycloalkyl, C_4-C_{20} alkylcycloalkyl, C_{4-}

$_{10}$ cycloalkenyl, C_{4-10} cycloalkynyl or C_6-C_{10} aryl is optionally substituted with one or more groups selected from -COOH, -COH, -SCH_3, -NH_2, =NH, -NHC(=NH)NH_2, -C(=O)NH_2, -OH, 4-hydroxyphenyl, 5-imidazolyl, 3-indolyl, halogen, -SO_3H, =O, C_{1-8} alkyl, C_{3-8} cycloalkyl, C_{4-9} cycloalkylalkyl, phenyl, 4-methylphenyl, benzyl, -O-C_{3-8} cyclalkyl, -O-C_{3-8} cycloalkyl, -O-C_{4-9} cycloalkylalkyl, -O-phenyl, -O-4-methylphenyl, -O-benzyl, -SO_2R^7 or -NHR^7 wherein R^7 is H, C_{1-8} alkyl, phenyl, 4-methylphenyl, benzyl or -NH_2, and wherein each C_{1-20} alkyl, C_{2-20} alkenyl, C_{2-20} alkynyl, C_{3-10} cycloalkyl, C_4-C_{20} alkylcycloalkyl, C_{4-10} cycloalkenyl, C_{4-10} cycloalkynyl or C_6-C_{10} aryl optionally contains one to three heteroatoms selected from N, O and S;

or R^1 and A, together with the nitrogen atom to which they are attached, form a 5- to 10-member heterocyclic ring or a 5- to 10-member heteroaromatic ring in which the free electron pair of the nitrogen atom to which R^1 and A is attached is not part of the aromatic pi-electron system, the 5- to 10-member heterocyclic or heteroaromatic ring being optionally substituted by one or more groups selected from C_{1-6} alkyl, C_{3-8} cycloalkyl, halogen, hydroxy, -OC_{1-6} alkyl or -OC_{3-8} cycloalkyl;

or R^1 and R^2, together with the nitrogen atom to which they are attached, form a 5- to 10-member heterocyclic ring or a 5- to 10-member heteroaromatic ring in which the free electron pair of the nitrogen atom to which R^1 and A is attached is not part of the aromatic pi-electron system, the 5- to 10-member heterocyclic or heteroaromatic ring being optionally substituted

by one or more groups selected from C_{1-6} alkyl, C_{3-8} cycloalkyl, halogen, hydroxy, $-OC_{1-6}$ alkyl or $-OC_{3-8}$ cycloalkyl;
or a salt thereof.

99. (New) A method according to claim 95, wherein the concentration of said hypochlorite oxidant in said aqueous hypochlorite oxidant solution immediately prior to mixing with said nitrogen-containing compound is not more than 24,000 ppm as total chlorine.

100. (New) A method according to claim 95, wherein said nitrogen-containing compound or mixture thereof is in an aqueous solution at a concentration of 0.5-60% w/v prior to mixing with the hypochlorite oxidant solution.

101. (New) A method according to claim 95, wherein said mixing takes place in a mixing chamber into and out of which there is a continuous flow of water during said mixing.

102. (New) A method according to claim 95, wherein said hypochlorite oxidant is selected from the group consisting of alkaline and alkali earth metal hypochlorites, hypochlorite released to water from a stable chlorine carrier and hypochlorite formed *in situ* from chlorine gas, and mixtures thereof.

103. (New) A method according to claim 95, wherein said hypochlorite oxidant is selected from the group consisting of

lithium hypochlorite, sodium hypochlorite, calcium hypochlorite, magnesium hypochlorite and potassium hypochlorite.

104. (New) A method according to claim 95, wherein said nitrogen-containing compound is selected from the group consisting of carbamic acid, sulfamic acid, glycine, glutamine, arginine, histidine, lysine, and mixtures thereof.

105. (New) A method according to claim 95, wherein Y is selected from the group consisting of carbamic acid, sulfamic acid, glycine, glutamine, arginine, histidine, and lysine.

106. (New) A method according to claim 101, wherein the concentration of said hypochlorite oxidant in said aqueous hypochlorite oxidant solution prior to mixing with said nitrogen-containing compound is not more than 24,000 ppm as total chlorine, and said mixing chamber comprises a conduit through which water flows as said hypochlorite oxidant solution and the nitrogen-containing compound are mixed.

107. (New) A method according to claim 106, wherein said solution of hypochlorite oxidant is prepared *in situ* in said conduit prior to addition of said solution of said nitrogen-containing compound to said conduit.

108. (New) A method according to claim 95, wherein said nitrogen-containing compound is diluted prior to mixing with the hypochlorite oxidant.

109. (New) A method according to claim 95, wherein said medium is pulp and paper factory process water.

110. (New) A method according to claim 95, wherein said medium is cooling tower water.

111. (New) A method according to claim 95, wherein said medium is waste water or reclaimed waste water.

112. (New) A method according to claim 95, wherein said medium is a clay slurry.

113. (New) A method according to claim 95, wherein said medium is a starch slurry.

114. (New) A method according to claim 95, wherein said medium is a sludge.

115. (New) A method according to claim 95, wherein said medium is soil.

116. (New) A method according to claim 95, wherein said medium is a colloidal suspension.

117. (New) A method according to claim 95, wherein said medium is irrigation water.

118. (New) A method according to claim 95, wherein said medium is a medium containing strong reducing agents.

119. (New) A method according to claim 95, wherein said medium is a medium having a high reducing capacity.

120. (New) A method according to claim 95, wherein said medium has an ORP of not greater than 150 millivolts.

121. (New) A method according to claim 95, wherein said hypochlorite oxidant and said nitrogen-containing compound are mixed in the absence of added bromide and the medium is substantially free of added bromide during application of said biocide.

122. (New) A method according to claim 95, wherein the concentration of said biocide immediately prior to being applied to said medium is from 1000 to 12,000 ppm expressed as total chlorine.

123. (New) A method according to claim 95, wherein the concentration of said biocide in said medium, upon application of the biocide to said medium, is 0.5-300 ppm expressed as chlorine.

124. (New) A method according to claim 95, wherein said biocide is effective within 1 hour of application to said medium.

125. (New) Apparatus for applying a biocide to a medium, comprising:

a nitrogen-containing compound reservoir containing a nitrogen-containing compound or mixture thereof selected from the group consisting of:

salts of the formula $Y^{x-}Z^{n+}_{x/n}$, wherein wherein x is 1 to 3, Y^{x-} is a basic form of an acid Y that contains at least one moiety selected from the group consisting of a primary amine moiety, a secondary amine moiety, a tertiary amine moiety, an amide moiety, an imide moiety, a sulfamide moiety, a sulfimide moiety, and an amineimine moiety, and Z^+ is a cation other than a cation of the form $[NH_2R^3R^4]^+$ wherein $[NH_2R^3R^4]^+$ is an acidic form of a base NHR^3R^4 wherein R^3 and R^4 are each independently selected from the group consisting of H and C_{1-8} alkyl, or R^3 and R^4, together with the nitrogen atom to which they are attached, form a 5- to 10-member heterocyclic ring optionally substituted by one or more groups selected from C_{1-6} alkyl, C_{3-8} cycloalkyl, halogen, hydroxy, $-OC_{1-6}$ alkyl or $-OC_{3-8}$ cycloalkyl, and n is a whole number greater than zero; and

amphoteric molecules Q containing at least one moiety selected from the group consisting of COOH and SO_3H and at least one moiety selected from the group consisting of a primary amine moiety, a secondary amine moiety, and a tertiary amine moiety;

a source of hypochlorite oxidant dilution having a concentration of between not more than 24,000 ppm as total chlorine,

and a mixing chamber operable to mix the dilution and the nitrogen-containing compound or mixture thereof in a molar ratio of nitrogen atoms in the nitrogen-containing compound to the hypochlorite of at least 1:1, to produce the biocide in the mixing chamber.

126. (New) Apparatus according to claim 125, wherein Y is selected from the group consisting of

(a) straight, branched and cyclic molecules containing at least one moiety selected from the group consisting of an amide moiety, an imide moiety, a sulfamide moiety, a sulfimide moiety, and an amineimine moiety, and Y^{x-} is basic form of the molecule, and

(b) amphoteric molecules containing at least one moiety selected from the group consisting of COOH and SO_3H and at least one moiety selected from the group consisting of a primary amine moiety, a secondary amine moiety, and a tertiary amine moiety, and Y^{x-} is an anionic form of said amphoteric molecule.

127. (New) Apparatus according to claim 125, wherein said source of hypochlorite oxidant dilution comprises a hypochlorite-containing reservoir containing a hypochlorite oxidant solution, and a diluter operable to dilute the

hypochlorite oxidant solution to produce said hypochlorite oxidant dilution having a concentration of not more than 24,000 ppm expressed as total chlorine.

128. (New) Apparatus according to claim 127, wherein said diluter and said mixing chamber are a single conduit which is adapted to dilute said hypochlorite oxidant prior to mixing with said nitrogen-containing compound or mixture thereof.

129. (New) A method for controlling microbial or biofilm growth in a medium, the method comprising mixing a nitrogen-containing compound, a bromide and an aqueous solution of a hypochlorite oxidant to form a biocide,
said nitrogen-containing compound being selected from the group consisting of salts of the formula $Y^{x-}[NH_2R^3R^4]^+_x$, salts of the formula $Y^{x-}Z^{n+}_{x/n}$, and molecules Y per se, wherein

Z^{n+} is a cation other than a cation of the form $[NH_2R^3R^4]^+$ wherein $[NH_2R^3R^4]^+$ is as defined below, and n is a whole number greater than zero

Y^{x-} is a basic form of an acid Y that contains at least one moiety selected from the group consisting of a primary amine moiety, a secondary amine moiety, a tertiary amine moiety, an amide moiety, an imide moiety, a sulfamide moiety, a sulfimide moiety, and an amineimine moiety; and

$[NH_2R^3R^4]^+$ is an acidic form of a base NHR^3R^4 wherein:

R^3 and R^4 are each independently selected from the group consisting of H and C_{1-8} alkyl,

or R^3 and R^4, together with the nitrogen atom to which they are attached, form a 5- to 10-member heterocyclic ring optionally substituted by one or more groups selected from C_{1-6} alkyl, C_{3-8} cycloalkyl, halogen, hydroxy, $-OC_{1-6}$ alkyl or $-OC_{3-8}$ cycloalkyl; and

x is 1 to 3;

and the molar ratio of nitrogen atoms in said nitrogen-containing compound to hypochlorite is at least 1:1,

and applying said biocide to said medium.